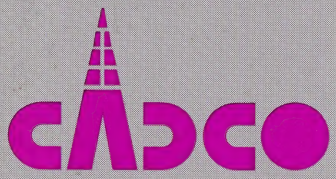

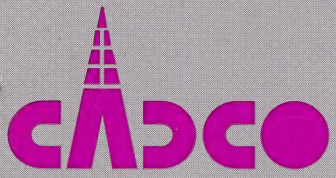

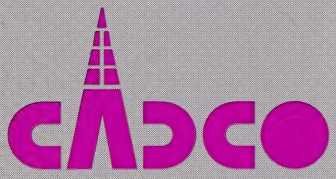

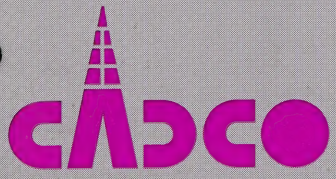

Broadband Communications Electronics

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BROADBAND

COMMUNICATIONS ELECTRONICS

1993 CATALOG

FROM THE PRESIDENT'S DESK . . .

For more than two decades. CADCO has manufactured domestic American cable television headend equipment, leading the way in low-noise receiving, SAW filtered heterodyne design, emergency warning systems, mini headends and CATV equipment surface mount technology.

Satellite broadcast technology shrunk the globe to an almost single community while CADCO's product line greatly expanded to serve the new world CATV market. CADCO is the first American CATV headend equipment manufacturer to design and build in the United States, headend equipment for not only system M/N, but B/G, D/K and I as well - in NTSC, PAL and SECAM color.

Regardless of the television system, CADCO's many models of fixed-channel and frequency agile modulators, demodulators and signals processors - will surely fulfill your headend design requirement.

We will also rack, wire, completely test and prepare for shipment your next headend.

Have a special application problem or need a special product? Please ask. CADCO does custom manufacturing.

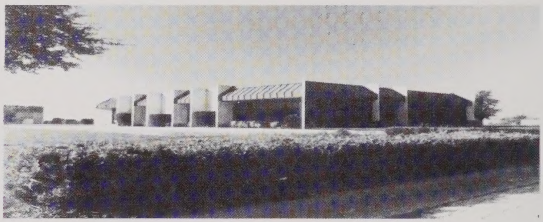
CADCO sells factory direct and through carefully selected reputable distributors in the United States and worldwide. CADCO supports a network of worldwide factory authorized service centers. Telephone or FAX our corporate office for direct sales or the name of your nearest CADCO distributor.

We at CADCO appreciate and thank you for your business.

Sincerely,

Jim Randolph

Jim "Randy" Randolph, President
CADCO, Inc.



TO OUR INTERNATIONAL CUSTOMERS...

CADCO headquarters is located in Garland, a suburb of Dallas, Texas. Fast, trouble-free air transportation is available to anywhere in the world through DFW International Airport, just 40 kilometers distance.

CADCO personnel are experienced in expediting international shipments.

Nearly any product manufactured by CADCO shown in this catalog is easily adaptable to international use.

CADCO office hours are USA Central Time (+6 hours UT Standard or +5 hours Summer Daylight) 8 a.m. to 5 p.m. Monday through Friday. CADCO may be contacted continuously by FAX.

CADCO TWO YEAR LIMITED WARRANTY

All standard products manufactured by CADCO, Inc. are warranted to meet all published specifications and to be free from material and workmanship defects. This warranty is for a period of two years from original date of shipment from factory or date of shipment from an authorized distributor with proof of shipping date. CADCO does not warrant fitness for purpose in any specific application, nor does the warranty cover misuse, abuse, or damage due to power sources, lightning or other acts of nature. CADCO's sole liability is to repair, replace or refund at CADCO's option. There shall be no further warranty expressed or implied.

2405 S. Shiloh Rd. • Garland, Texas, 75041 • 1-800-877-2288 • 214-271-3651 • FAX 214-271-3654

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BROADBAND COMMUNICATIONS

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EQUIPMENT SERVICE

Most parts and materials used by CADCO are standard, however, they are selected to perform together to meet specification in circuits. Therefore, CADCO recommends that equipment requiring either modification or repair be returned to CADCO for service.

CADCO endeavors to provide a maximum turn-around time of two weeks on repairs and modifications. If you require quicker turnaround time, EXPEDITE SERVICES are available at a nominal cost.

Please telephone CADCO prior to shipping your equipment.

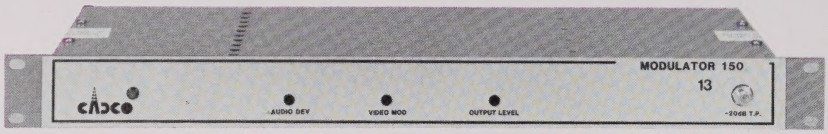
CADCO does not service any equipment other than that manufactured by CADCO.

OTHER SERVICES OF CADCO . . .

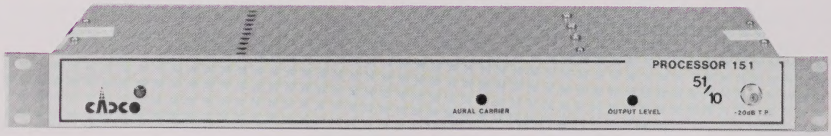
- *Racked Headends . . .* Design, custom rack, wire and test your headend prior to shipment, so that it is ready to go when you get it.
- *Antenna Requirements . . .* Perform antenna signal strength surveys and recommend appropriate off-air antennas.
- *Custom Designs . . .* Modify designs of existing CADCO products for specific applications and custom manufacture them for you . . . as well as custom design, engineer and manufacture specific equipment for your special applications.

If you need something special, call CADCO! We will help you.

MODULATOR 150B



HETERODYNE PROCESSOR 151B



INTERNATIONAL MODELS AVAILABLE!

FEATURES

- Matched Processors and Modulators for Use in Adjacent Channel SMATV and MATV Headends
- +45 dBmV Output
- SAW — VSB Filtering
- Output Channels 2 Through 78 and International Channels
- Processor Inputs 2-13 VHF and 14-69 UHF Off-Air and International Channels
- FCC Offsets, Standard as Required by FCC
- Independent Internal Power Supplies
- Synthesized Oscillators - Crystal Referenced Phase Locked (Including the Aural Carrier)
- Front Panel Controls and Test Point
- Surface Mount Technology Construction

These low cost Modulators and Processors are designed for outstanding performance in any MATV or SMATV system up to 550 MHz. SAW filtering, maximum use of hybrid amplifiers, and independent power supplies will provide years of stable service in a minimum maintenance headend.

INTERNATIONAL MODELS AVAILABLE!

SPECIFICATIONS

MODULATOR 150B

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China	SYSTEM I
VIDEO SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Frequency Response	±1.0 dB	±1.0 dB	±1.0 dB	±1.0 dB
Bandwidth	4.2 MHz	5.0 MHz	5.0 MHz	5.5 MHz
Differential Gain	5% max	5% max	5% max	5% max
Differential Phase	5 degree max	5 degree max	5 degree max	5 degree max
Hum & Noise	-60 dB	-60 dB	-60 dB	-60 dB
AUDIO SECTION				
Input: 50 Hz-15 KHz	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)
Impedance	600 ohms balanced	600 ohms balanced	600 ohms balanced	600 ohms balanced
Frequency Response	±1.0 dB	±1.0 dB	±1.0 dB	±1.0 dB
Frequency Tolerance, ±500 Hz	4.5 MHz	5.5 MHz	6.5 MHz	6.0 MHz
Frequency Deviation	±25 KHz	±50 KHz	±50 KHz	±50 KHz
Harmonic Distortion	1% max	1% max	1% max	1% max
Preemphasis	75µs	50µs	50µs	50µs
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
RF SECTION				
Output Frequency	50-550 MHz	47-550 MHz	44-550 MHz	48-550 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level	+45 dBmV max	+45 dBmV max	+45 dBmV max	+45 dBmV max
adjustable	+105 dBµV	+105 dBµV	+105 dBµV	+105 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-552 MHz @+45 dBmV/+105 dBµV Output Level	<-57 dBc	<-57 dBc	<-57 dBc	<-57 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response	<2 dB	<2 dB	<2 dB	<2 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 7" (17.6 cm) Deep
Weight	6 Pounds (2.7 kg)
Power	115/240 VAC 50/60 Hz 6 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

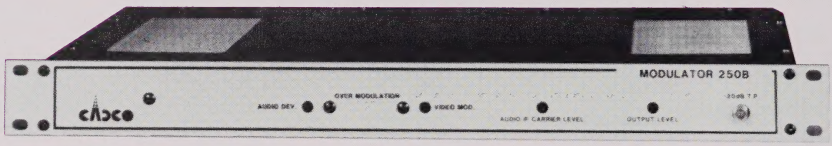
HETERODYNE PROCESSOR 151B

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China	SYSTEM I
R. F. INPUT SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Input Frequencies	54-216 MHz	47-230 MHz	47-223 MHz	45-254 MHz
Off-Air Channels	470-806 MHz	470-800 MHz	470-800 MHz	470-800 MHz
R. F. Bandwidth	6.0 MHz	8.0 MHz	8.0 MHz	8.0 MHz
Input A.G.C. Range	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV
Input A.G.C. Type	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref
Recommended Input	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV
Noise Figure	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF
Adjacent Channel Rejection	60 dB	60 dB	60 dB	60 dB
Image Rejection	20 dB	20 dB	20 dB	20 dB
Audio Carrier Adjustment Range Below the Video Carrier	10-20 dB	10-20 dB	10-20 dB	10-20 dB
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
RF SECTION				
Output Frequency	54-550 MHz	47-550 MHz	44-550 MHz	48-550 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level	+45 dBmV max	+45 dBmV max	+45 dBmV max	+45 dBmV max
adjustable	+105 dBµV	+105 dBµV	+105 dBµV	+105 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-552 MHz @+45 dBmV/+105 dBµV Output Level	<-57 dBc	<-57 dBc	<-57 dBc	<-57 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response from Pc to Sc	±1 dB	±1 dB	±1 dB	±1 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 7" (17.78 cm) Deep
Weight	6 Pounds (2.7 kg)
Power	115/240 VAC 50/60 Hz 6 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

MODULATOR 250B



4.5 MHz Stereo and Baseband Audio Inputs

HETERODYNE PROCESSOR 251B

INTERNATIONAL MODELS AVAILABLE!

FEATURES

- Output Channels T7 Through T11 and 2 Through 78 Standard, HRC or IRC Trequency and FCC Offsets and International Channels
- Processor Input Off-Air Channels 2 Through 69 and International Channels
- SAW Filtered +60 dBmV Output Using Low-Distortion Hybrid Amplifiers
- Phase Lock Loop FM Audio
- LED Audio/Video Over Modulation Indicators
- Optional 4.5 MHz Subcarrier and Baseband Audio Inputs (Modulator Only)
- External Separate Audio/Video and Composite IF Loop-Through
- Synthesized Oscillators - Crystal Referenced Phase Locked
- Front Panel Controls and Test Point
- Surface Mount Technology Construction

This matched Modulator and Processor are ideal for any system needing CATV quality performance and long term stability at an economical price.

INTERNATIONAL MODELS AVAILABLE!

SPECIFICATIONS

MODULATOR 250B

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China*	SYSTEM I
VIDEO SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Frequency Response	±0.5 dB	±0.5 dB	±0.5 dB	±0.5 dB
Bandwidth	4.2 MHz	5.0 MHz	5.0 MHz	5.5 MHz
Differential Gain	5% max	5% max	5% max	5% max
Differential Phase	5 degree max	5 degree max	5 degree max	5 degree max
Hum & Noise	-60 dB	-60 dB	-60 dB	-60 dB
AUDIO SECTION				
Input: 50 Hz-15 KHz	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)
Impedance	600 ohms balanced	600 ohms balanced	600 ohms balanced	600 ohms balanced
Frequency Response	±1.0 dB	±1.0 dB	±1.0 dB	±1.0 dB
Frequency Tolerance, ±500 Hz	4.5 MHz	5.5 MHz	6.5 MHz	6.0 MHz
Frequency Deviation	±25 KHz	±50 KHz	±50 KHz	±50 KHz
Harmonic Distortion	1% max	1% max	1% max	1% max
Preemphasis	75µs	50µs	50µs	50µs
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
RF SECTION				
Output Frequency	7-550 MHz	47-550 MHz	44-550 MHz	48-550 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level	+60 dBmV max	+60 dBmV max	+60 dBmV max	+60 dBmV max
adjustable	+120 dBµV	+120 dBµV	+120 dBµV	+120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-552 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response	<2 dB	<2 dB	<2 dB	<2 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	8 Pounds (3.6 kg)
Power	115/240 VAC 50/60 Hz 30 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

* Acceptance Tested by the China Ministry of Radio, Television and Film.

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

HETERODYNE PROCESSOR 251B

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China*	SYSTEM I
R. F. INPUT SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Input Frequencies	54-216 MHz	47-230 MHz	47-223 MHz	45-254 MHz
Off-Air Channels	470-806 MHz	470-800 MHz	470-800 MHz	470-800 MHz
R. F. Bandwidth	6.0 MHz	8.0 MHz	8.0 MHz	8.0 MHz
Input A.G.C. Range	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV
Input A.G.C. Type	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref
Recommended Input	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV
Noise Figure	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF
Adjacent Channel Rejection	60 dB	60 dB	60 dB	60 dB
Image Rejection	20 dB	20 dB	20 dB	20 dB
Audio Carrier Adjustment Range Below the Video Carrier	10-20 dB	10-20 dB	10-20 dB	10-20 dB
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
RF SECTION				
Output Frequency	54-550 MHz	47-550 MHz	44-550 MHz	48-550 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level adjustable	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-552 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response from Pc to Sc	±1 dB	±1 dB	±1 dB	±1 dB

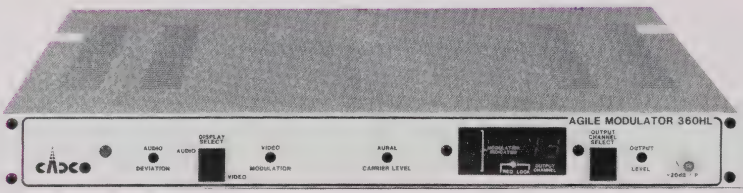
MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	8 Pounds (3.6 kg)
Power	115/240 VAC 50/60 Hz 30 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

* Acceptance Tested by the China Ministry of Radio, Television and Film.

INTERNATIONAL MODELS AVAILABLE!

AGILE MODULATOR 360HL



4.5 MHz Stereo and Baseband Audio Inputs

AGILE PROCESSOR 361HL

INTERNATIONAL MODELS AVAILABLE!

FEATURES

- Selectable Output Channels 2 Through 62 (54-450 MHz) Standard or HRC With Automatic +12.5 KHz or 25.0 KHz FCC Offsets and International Channels
- Processor Input Off-Air Channels Selectable 2 Through 69 (VHF and UHF) With Automatic Input Offset Control and International Channels
- Microprocessor Controlled With Self-Diagnostic Monitoring
- BAR Graph Modulation and Channel LED Readout
- Synthesized Oscillators - Crystal Referenced Phase Locked
- Non-Volatile Channel Selection
- RF Muted During Tuning
- +60 dBmV Output Using Low-Distortion Hybrid Amplifiers
- Phase Lock Loop FM Audio (Modulator)
- Optional 4.5 MHz Subcarrier and Baseband Audio Inputs (Modulator)
- External Separate Audio/Video and Composite IF Loop-Through (Modulator)
- External Composite IF Loop-Through (Processor)
- Sound Carrier Level Adjustable -10 dB to -20 dB (Modulator and Processor)
- SAW Filtered IF Designed for Adjacent Channel Operation
- Internal Switch Selects Standard or HRC Output
- Surface Mount Technology Construction
- RS 232 Control Option

INTERNATIONAL MODELS AVAILABLE!

SPECIFICATIONS

MODULATOR 360HL

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China*	SYSTEM I
VIDEO SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Frequency Response	±0.5 dB	±0.5 dB	±0.5 dB	±0.5 dB
Bandwidth	4.2 MHz	5.0 MHz	5.0 MHz	5.5 MHz
Differential Gain	5% max	5% max	5% max	5% max
Differential Phase	5 degree max	5 degree max	5 degree max	5 degree max
Hum & Noise	-60 dB	-60 dB	-60 dB	-60 dB
AUDIO SECTION				
Input: 50 Hz-15 KHz	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)
Impedance	600 ohms balanced	600 ohms balanced	600 ohms balanced	600 ohms balanced
Frequency Response	±1.0 dB	±1.0 dB	±1.0 dB	±1.0 dB
Frequency Tolerance, ±500 Hz	4.5 MHz	5.5 MHz	6.5 MHz	6.0 MHz
Frequency Deviation	±25 KHz	±50 KHz	±50 KHz	±50 KHz
Harmonic Distortion	1% max	1% max	1% max	1% max
Preemphasis	75µs	50µs	50µs	50µs
FIRST IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV	+27 dBmV	+27 dBmV	+27 dBmV
Adjustable	+82 dBµV	+87 dBµV	+87 dBµV	+87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
Second IF Frequency	612 MHz	612 MHz	612 MHz	612 MHz
RF SECTION				
Output Frequency	50-450 MHz	47-450 MHz	44-450 MHz	48-450 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level	+60 dBmV max	+60 dBmV max	+60 dBmV max	+60 dBmV max
adjustable	+120 dBµV	+120 dBµV	+120 dBµV	+120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-612 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response	<2 dB	<2 dB	<2 dB	<2 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	12 Pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 40 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

* Acceptance Tested by the China Ministry of Radio, Television and Film.

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

MODULATOR 360HLT

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China*	SYSTEM I
VIDEO SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Frequency Response	±0.5 dB	±0.5 dB	±0.5 dB	±0.5 dB
Bandwidth	4.2 MHz	5.0 MHz	5.0 MHz	5.5 MHz
Differential Gain	5% max	5% max	5% max	5% max
Differential Phase	5 degree max	5 degree max	5 degree max	5 degree max
Hum & Noise	-60 dB	-60 dB	-60 dB	-60 dB
AUDIO SECTION				
Input: 50 Hz-15 KHz	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)
Impedance	600 ohms balanced	600 ohms balanced	600 ohms balanced	600 ohms balanced
Frequency Response	±1.0 dB	±1.0 dB	±1.0 dB	±1.0 dB
Frequency Tolerance, ±500 Hz	4.5 MHz	5.5 MHz	6.5 MHz	6.0 MHz
Frequency Deviation	±25 KHz	±50 KHz	±50 KHz	±50 KHz
Harmonic Distortion	1% max	1% max	1% max	1% max
Preemphasis	75µs	50µs	50µs	50µs
FIRST IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV	+27 dBmV	+27 dBmV	+27 dBmV
Adjustable	+82 dBµV	+87 dBµV	+87 dBµV	+87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
Second IF Frequency	612 MHz	612 MHz	612 MHz	612 MHz
RF SECTION				
Output Frequency	5-330 MHz	47-330 MHz	44-330 MHz	48-330 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level	+60 dBmV max	+60 dBmV max	+60 dBmV max	+60 dBmV max
adjustable	+120 dBµV	+120 dBµV	+120 dBµV	+120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-612 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response	<2 dB	<2 dB	<2 dB	<2 dB

NOTE: Output Level for 5-36 MHz is reduced to 53 dBmV (+113 dBµV) only available with System M/N

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	12 Pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 40 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

* Acceptance Tested by the China Ministry of Radio, Television and Film.

INTERNATIONAL MODELS AVAILABLE!

SPECIFICATIONS

MODULATOR 360HLU

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China*	SYSTEM I
VIDEO SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Frequency Response	±0.5 dB	±0.5 dB	±0.5 dB	±0.5 dB
Bandwidth	4.2 MHz	5.0 MHz	5.0 MHz	5.5 MHz
Differential Gain	5% max	5% max	5% max	5% max
Differential Phase	5 degree max	5 degree max	5 degree max	5 degree max
Hum & Noise	-60 dB	-60 dB	-60 dB	-60 dB
AUDIO SECTION				
Input: 50 Hz-15 KHz	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)	0 dBm (.8V)
Impedance	600 ohms balanced	600 ohms balanced	600 ohms balanced	600 ohms balanced
Frequency Response	±1.0 dB	±1.0 dB	±1.0 dB	±1.0 dB
Frequency Tolerance, ±500 Hz	4.5 MHz	5.5 MHz	6.5 MHz	6.0 MHz
Frequency Deviation	±25 KHz	±50 KHz	±50 KHz	±50 KHz
Harmonic Distortion	1% max	1% max	1% max	1% max
Preemphasis	75µs	50µs	50µs	50µs
FIRST IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level Adjustable	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
Second IF Frequency	612 MHz	612 MHz	612 MHz	612 MHz
RF SECTION				
Output Frequency	174-550 MHz	174-550 MHz	174-550 MHz	174-550 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level adjustable	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-612 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response	<2 dB	<2 dB	<2 dB	<2 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	12 Pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 40 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

* Acceptance Tested by the China Ministry of Radio, Television and Film.

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

HETERODYNE PROCESSOR 361HL

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China*	SYSTEM I
R. F. INPUT SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Input Frequencies	54-216 MHz	47-230 MHz	47-223 MHz	45-254 MHz
Off-Air Channels	470-860 MHz	470-860 MHz	470-860 MHz	470-860 MHz
R. F. Bandwidth	6.0 MHz	8.0 MHz	8.0 MHz	8.0 MHz
Input A.G.C. Range	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV
Input A.G.C. Type	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref
Recommended Input	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV
Noise Figure	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF
Adjacent Channel Rejection	60 dB	60 dB	60 dB	60 dB
Image Rejection	20 dB	20 dB	20 dB	20 dB
Audio Carrier Adjustment Range Below the Video Carrier	10-20 dB	10-20 dB	10-20 dB	10-20 dB
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
Second IF Frequency	612 MHz	612 MHz	612 MHz	612 MHz
RF SECTION				
Output Frequency	50-450 MHz	47-450 MHz	44-450 MHz	48-450 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level	+60 dBmV max	+60 dBmV max	+60 dBmV max	+60 dBmV max
adjustable	+120 dBµV	+120 dBµV	+120 dBµV	+120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-552 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response from Pc to Sc	±1 dB	±1 dB	±1 dB	±1 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	12 Pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 40 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)

NOTE

1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack.
2. If mounted in an enclosed cabinet, air flow is recommended.

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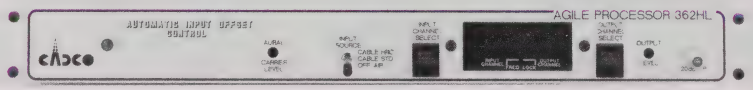
INTERNATIONAL MODELS AVAILABLE!

AGILE PROCESSOR 362HL
(Off-Air or Off-Cable)



INTERNATIONAL MODELS AVAILABLE!

FEATURES

- Totally Microprocessor Controlled With Self-Diagnostic Monitoring
- Selectable Input Channels

  Off-Air Channels 2 Through 69 (VHF and UHF)
  Standard Off-Cable Channels 2 Through 78 (550 MHz) Including A1 and A2
  HRC Off-Cable Channels 1 Through 78 (550 MHz) Including A1 and A2
- Automatic Input Offset Control Unique Circuit Detects and Corrects Input Signal Offset Frequency For Heterodyne Processing Before the IF
- Selectable Output Channels 2 Through 78 (54-448 MHz Including A1 and A2) Standard or HRC With Automatic +12.5 KHz or +25.0 KHz FCC Offsets
- Non-Volatile Channel Memory
- Synthesized Oscillators - Crystal Referenced Phase Locked
- Bar Graph and LED Readout
- SAW Filtered IF Designed for Adjacent Channel Operation
- +60 dBmV Output Using Low-Distortion Hybrid Amplifiers
- RF Muted During Tuning
- Sound Carrier Level Adjustable -13 to -17 dB (Off-Air)
- External Composite IF Loop-Through

The new CADCO Model 362HL is the Industry's first heterodyne signal processor to automatically determine the input signal offset frequency, whether the source is off-air or off-cable (standard or HRC) and correct for standard IF heterodyne processing to a selectable output channel with zero offset or FCC offset +12.5 KHz or +25.0 KHz as required.

The CADCO Model 362HL is totally microprocessor controlled; frequency stability and accuracy exceeds FCC specifications. This unique feature completely eliminates any concern about a processed channel meeting FCC aeronautical frequency offset requirements..

Only CADCO gives you this heterodyne processing "NO WORRY OFFSET" feature.

Extremely low in-band and out-of-band carrier-to-noise performance allows stacking of multiple processors in your headend.

SPECIFICATIONS

HETERODYNE PROCESSOR 362HL

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China	SYSTEM I
R. F. INPUT SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Input Frequencies	54-450 MHz	47-450 MHz	47-450 MHz	45-450 MHz
Off-Air Channels	470-860 MHz	470-860 MHz	470-860 MHz	470-860 MHz
R. F. Bandwidth	6.0 MHz	8.0 MHz	8.0 MHz	8.0 MHz
Input A.G.C. Range	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV
Input A.G.C. Type	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref
Recommended Input	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV
Noise Figure	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF
Adjacent Channel Rejection	60 dB	60 dB	60 dB	60 dB
Image Rejection	20 dB	20 dB	20 dB	20 dB
Audio Carrier Adjustment Range Below the Video Carrier	10-20 dB	10-20 dB	10-20 dB	10-20 dB
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
Second IF Frequency	612 MHz	612 MHz	612 MHz	612 MHz
RF SECTION				
Output Frequency	50-450 MHz	47-450 MHz	44-450 MHz	48-450 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level adjustable	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV	+60 dBmV max +120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-552 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response from Pc to Sc	±1 dB	±1 dB	±1 dB	±1 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	12 Pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 40 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

SPECIFICATIONS

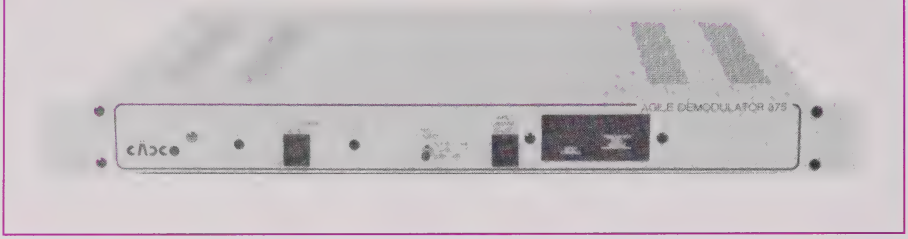
HETERODYNE PROCESSOR 362HLT

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China	SYSTEM I
R. F. INPUT SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Input Frequencies	5-450 MHz	47-450 MHz	44-450 MHz	48-450 MHz
Off-Air Channels	470-860 MHz	470-860 MHz	470-860 MHz	470-860 MHz
R. F. Bandwidth	6.0 MHz	8.0 MHz	8.0 MHz	8.0 MHz
Input A.G.C. Range	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV
Input A.G.C. Type	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref
Recommended Input	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV
Noise Figure	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF
Adjacent Channel Rejection	60 dB	60 dB	60 dB	60 dB
Image Rejection	20 dB	20 dB	20 dB	20 dB
Audio Carrier Adjustment Range Below the Video Carrier	10-20 dB	10-20 dB	10-20 dB	10-20 dB
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
Second IF Frequency	612 MHz	612 MHz	612 MHz	612 MHz
RF SECTION				
Output Frequency	54-450 MHz	47-450 MHz	44-450 MHz	48-450 MHz
Frequency Tolerance	±3 KHz	±3 KHz	±3 KHz	±3 KHz
Output Level	+60 dBmV max	+60 dBmV max	+60 dBmV max	+60 dBmV max
adjustable	+120 dBµV	+120 dBµV	+120 dBµV	+120 dBµV
Output Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Spurious Output 5-552 MHz @+60 dBmV/+120 dBµV Output Level	<-60 dBc	<-60 dBc	<-60 dBc	<-60 dBc
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
Frequency Response from Pc to Sc	±1 dB	±1 dB	±1 dB	±1 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	12 Pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 40 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)
NOTE	1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack. 2. If mounted in an enclosed cabinet, air flow is recommended.

AGILE DEMODULATOR 375/375T



FEATURES

- Frequency Agile Microprocessor Control
- Selectable Input Channels
  - VHF/UHF Off-Air and Off-Cable
  - Television Systems M/N, B/G, D/K and I in NTSC or PAL Color
  - Sub-low Channels T7 Through T14 optional
- Zero Chopper
- External Composite IF Loop
- Multiple Video Output Ports
- Composite and Vertical Sync Output Ports
- Loss-of-Signal Video Mute
- Nyquist SAW Filtered IF
- Synchronous Video Detection
- 4.5 MHz Aural Subcarrier Output (System M/N)
- Optional RS-232 Control
- Composite Video & Aural Subcarrier Output Port

CADCO demodulator 375 (375T with optional T-channels precisely demodulates an RF video/audio television signal to baseband video and audio. Designed for CATV applications, the 375 economically satisfies many TV station, LPTV and MMDS requirements. The 375 features multiple output configurations like video/ 4.5 MHz audio subcarrier (system M/N) separately selectable or as a composite and two additional standard video only ports. The 375 contains Synchronous Detection and a Zero Chopper. The Zero Chopper is a 0 carrier reference signal to accurately set depth of video modulation without a spectrum analyzer. Composite and Vertical Composite Sync are externally availabie for frame synchronization of auxiliary equipment like tape players.

SPECIFICATIONS

AGILE DEMODULATOR 375(T)

PARAMETER	SYSTEM M/N	SYSTEM B/G	SYSTEM D/K China	SYSTEM I
VIDEO SECTION				
Input: C3F Neg	NTSC	PAL	PAL	PAL
Input Impedance	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced	75 ohms unbalanced
Input Frequencies	54-860 MHz 7-35 MHz	47-860 MHz	47-860 MHz	45-860 MHz
R. F. Bandwidth	6.0 MHz	8.0 MHz	8.0 MHz	8.0 MHz
Input A.G.C. Range	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV	-10 to +20 dBmV +50 to +80 dBµV
Input A.G.C. Type	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref	Sync Tip Ref
Recommended Input	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV	0 to +10 dBmV +60 to 70 dBµV
Noise Figure	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF	9 dB VHF 10 dB UHF
Adjacent Channel Rejection	60 dB	60 dB	60 dB	60 dB
Image Rejection	20 dB	20 dB	20 dB	20 dB
Audio Carrier Adjustment Range Below the Video Carrier	10-20 dB	10-20 dB	10-20 dB	10-20 dB
IF SECTION				
Video IF Level	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV	+37 dBmV +97 dBµV
Audio IF Level Adjustable	+22 dBmV +82 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV	+27 dBmV +87 dBµV
Return Loss	>14 dB	>14 dB	>14 dB	>14 dB
IF Frequency				
Video Carrier	45.75 MHz	38.9 MHz	38.0 MHz	38.9 MHz
Audio Carrier	41.25 MHz	33.4 MHz	31.5 MHz	32.9 MHz
Video-Sound Spacing	+4.5 MHz	+5.5 MHz	+6.5 MHz	+6.0 MHz
Vestigial Sideband Width	0.75 MHz	0.75 MHz	0.75 MHz	1.25 MHz
OUTPUT SECTION				
Video Output Adjustable: 75 ohms	0.5-1.4 V P-P	0.5-1.4 V P-P	0.5-1.4 V P-P	0.5-1.4 V P-P
Frequency Response @NTSC 4 MHz, PAL 5 MHz	±1 dB	±1 dB	±1 dB	±1 dB
Differential Gain	5% Max	5% Max	5% Max	5% Max
Differential Phase	5 Deg Max	5 Deg Max	5 Deg Max	5 Deg Max
Chrominance to Luminance Delay	30 nsec max	30 nsec max	30 nsec max	30 nsec max
Signal to Noise weighted CCIR	50 dB min	50 dB min	50 dB min	50 dB min
Audio Output Adjustable: 600 ohms	0.5-1.4 V P-P	0.5-1.4 V P-P	0.5-1.4 V P-P	0.5-1.4 V P-P
Distortion: @1 KHz	1% max	1% max	1% max	1% max
Signal to Noise, w/deemphasis	50 dB min	50 dB min	50 dB min	50 dB min

MECHANICAL AND POWER

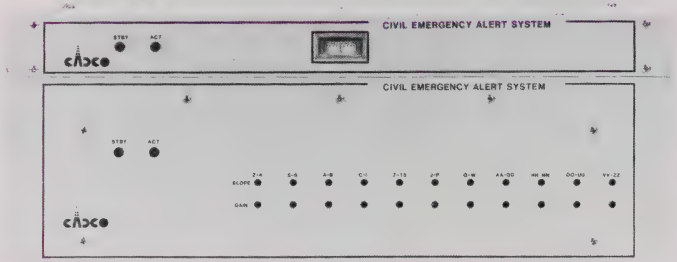
Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	12 Pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 40 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)

NOTE

1. We recommend 1.75" (4.44 cm) spacing between units racked in an open rack.
2. If mounted in an enclosed cabinet, air flow is recommended.

INTERNATIONAL MODELS AVAILABLE!

CIVIL EMERGENCY ALERT SYSTEM CEAS V



CADCO pioneered the concept of cable television emergency warning systems nearly two decades ago with a 12 channel system based on the premise of immediate direct access to the public by civil emergency officials. The concept of speed and direct access precluded such features as video, that require preparation prior to activation or impose additional burden on officials busy with disaster duties. The merits of voice-only direct access have been confirmed by nearly 20 years of actual use and more recently by a government study making it the only type cable warning system in wide spread use. Through the years the CEAS has seen numerous model changes to incorporate field experience and later electronic technology, making the system more flexible and reliable while expanding the channel capacity.

BASIC DESIGN CONCEPT

To make the CEAS compatible with virtually all cable systems and to minimize installation, the CEAS is a complete stand alone generator of all channels carried by the cable system. A coaxial switch controlled by the CEAS is inserted in the outgoing distribution cable to the city following the existing cable head-end. When activated remotely by the designated official dialing an access code on a standard phone, the cable distribution input is switched from the normal programming headend equipment to the CEAS.

Upon activation a 6-second alerting signal is automatically transmitted. This a distinctive louder-than-normal warbling tone designed to draw the attention of residents even if they are in other rooms. After the alerting signal the verbal message is given by the official. The audio received via the telephone is processed and volume controlled by the CEAS for maximum clarity compensating for widely varying voice strengths and characteristics.

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

CIVIL EMERGENCY ALERT SYSTEM CEAS V

SYNTHESIZER

Output Channel Groups	2-4, 5-6, A-B, C-I, 7-13, J-P, Q-W, AA-GG, HH-NN, OO-UU, VV- BBB
Output Frequencies	Standard, HRC, IRC, Inverted Including FCC Offsets
Output Level	+40 dBmV max
Level Adjustment (each group)	20 dB min
Slope Adjustment (each group)	3 dB min
FM Deviation (modulation)	±25 KHz

TRUNK SWITCH

Insertion Loss	1 dB from 50-450 MHz

CONTROL UNIT INPUT LEVELS

Maximum Line Loss (tel. std. levels)	14 dB
Audio Input Range (AGC Window)	30 mV to 300 mV

MECHANICAL AND POWER

Standard Rack Mounting	Control 1.75" (4.44 cm) Vertical Space Synthesizer 5.25" (13.35 cm) Vertical Space
Weight	26 pounds (11.7 kg)
Power	115 VAC ±10 VAC
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)

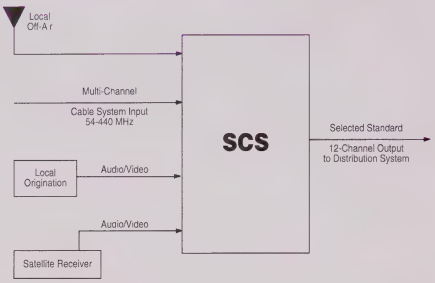
We recommend 1.75" (4.44 cm) spacing between rack mounted equipment

A manual fully detailing the CEAS is available free of charge from CADCO

OPTIONS

1. The channel capacity may be from 12 to 63 channels as selected by plug-in modules.
2. A three digit access code is initially set at the factory. The code may be changed in the field should security be compromised by personnel changes.
3. Activation Methods
   a. Activation and access can be made from any Touch Tone phone. This option is the most popular since it allows multiple access points and multiple designated officials. With this system the telephone number is dialed first followed by the access code.
   b. A dedicated line leased from the telephone company or installed by the cable operator can provide access from a single control point. With this system, only the access code needs to be dialed. The CEAS constantly monitors the integrity of the dedicated line since it is not in normal service and telephone company maintenance.
   c. Radio activation can be accomplished utilizing Dual Tone Multiple Frequency (DTMF, Touch Tone) transmitters and receivers built by General Electric, Motorola and others for this type of remote radio control.

SELECT CABLE SERVICE SCS®



Typical Application

The Select Cable Service (SCS) was developed by CADCO as a modular interface headend between cable systems and distribution systems such as those in hotels, hospitals and similar applications. The concept of "cherry-picking" the cable system channels and eliminating converters led to packaging SCS in 12-channel increments. However, the SCS cabinet can accommodate up to 18 channels. Fundamentally, SCS is similar to most top-line heterodyne headends including options for special situations.

INPUT MODULES.

A. The most commonly used input module is the cable-input downconverter. The input filter of this unit selects one 6 MHz channel between 54 and 440 MHz. The signal is amplified and downconverted by a phase-locked oscillator to the master reference oscillator. The signal is AGC controlled to a 10 dB operating window. Top-Line models like the SCS differ from standard heterodyne signal processor inputs in extra input filtering and the use of hybrid amplifiers used in line distribution equipment, both necessary to prevent overload when interfacing a fully loaded cable system as an input.

   An input splitter/amplifier is normally used with the cable input modules to preamplify the input signal overcoming 13 dB of splitter loss.

   A unique application is to use standard subscriber type converters between the input splitter and the downconverters in order to descramble or use other addressable features of the CATV system. The high adjacent rejection allows use of all the converters with either Channel 2, 3 or 4 output.

B. A second input option is a modulator module, plug-in interchangeable with other input modules. It is not channelized, since the output is standard IF.

   The Modulator module is used primarily to provide local origination programming, security monitoring unique to the MATV system, or additional satellite programming not carried by the cable system.

C. A third interchangeable input module is the off-air downconverter. This module has more gain for operation, down to -10 dBmV input on all VHF and UHF channels and an expanded AGC range. This module and the modulator module may be used as a mini-headend independent of a cable system input before actual cable service might reach the MDU site, as well as a permanent headend.

OUTPUT MODULES.

The channelized output module accepts standard IF signals from its associated input module, and passes the signal through a high rejection 5.2 MHz SAW filter, thus eliminating adjacent channels or the unwanted modulation sideband. The IF is upconverted by a phase-locked oscillator referenced to the master oscillator. The output is filtered to remove mixer products and amplified to 45 dBmV. The output

SPECIFICATIONS

SELECT CABLE SERVICE SCS®

modules are available for all channels between 54 and 440 MHz.

SCS may be operated at 54 dBmV output on 12 channels with acceptable intermodulation products. To preserve frequency relationships established at the CATV headend, all downconverter and upconverter oscillators are locked together by a common reference. The reference oscillators are of the voltage-controlled crystal type, so should a reference be lost, frequency stability is maintained.

Cabinet	
Size	30" (76.2 cm) H x 21" (53.34 cm) W x 23" (58.42 cm) D
Weight (12 ch.)	160 pounds (72 kg)
Power	115 ±10 VAC. 180 Watts (12 ch.)
Constant Voltage Power Supply	18 ±1 VDC to module cases (rear panel mtg.)
Input Splitter/Amp	Divides cable drop (1 per cable req'd)
Gain (net)	3 ±1 dB
Freq. Coverage	54-440 MHz
Test Point	+10 dB ref. to input
Input Level	12 dBmV to 22 dBmV
Module Case	Reference frequency
Reference Module	62.5 KHz and 31.25 KHz reference frequency to phase lock all modules
Input Module Options	
Off Cable Down Converter	
Frequency Range	54-440 MHz: STD. HRC. IRC
AGC Range	10 dB
Input Level (to splitter)	15-25 dBmV (9-19 dBmV high gain opt.)
Off Air Down Converter	
Frequency coverage	Chs. 2-13 VHF and 14-69 UHF Standard NTSC
Input Level	-5 dBmV to +25 dBmV (splitter amp not used)
Aural Carrier	5-9 dB attenuation
Modulator	
Video Input	Composite Video sync negative .5-2.0 volts peak-to-peak minimum for 87% modulation
Audio Input	.25-2.0 Volts Peak-to-Peak minimum for ±25 KHz deviation
Aural Carrier	10-20 dB below Video
Input Impedance	75 ohms Video; >5 K ohms Audio
Video Freq. Response	50 Hz to 4.2 MHz
Output Module	
IF Freq.	41.25 MHz Audio; 45.75 MHz Video
Spurs and Adj. Channel interference	>57 dB (SAW filtered)
Output Level	25 dBmV to 45 dBmV
Frequency Range	54-440 MHz
Output Combiner/Amplifier	
Gain (net)	17 dB
Output Level (adjustable)	35-55 dBmV
Test Point	-20 dB ref. to output

OPTIONS

1. Up to 18-channel capacity (per single cabinet)

Write or Telephone CADCO For Full Technical Information

INTERNATIONAL MODELS AVAILABLE!

LAN FREQUENCY TRANSLATORS
CATV CHANNEL CONVERTERS

FEATURES

- Provides maximum freedom in Frequency Planning and Allocation -6 MHz Bandwidth models (CATV and LAN) are available to translate any 6 MHz Band to any other frequency, up or down, from 5 MHz to 440 MHz, including the IEEE 156.25 and 192.25 MHz offsets, dual cable 0 offset and including T12, T13, and T14 channels with 70 MHz IF
- LAN Model FT-18 Model covers all 6 IEEE recommended 3 channel groups between 35.75 and 83.75 MHz with both 156.25 and 192.25 offsets and the 12 dual cable groups with 0 offsets between 36 and 276 MHz
- Compatible with the IBM PC Network
- Compatible with Sytek Broadband Network Adapter Cards and Terminal Servers
- Meets the functional requirements in most MAP/TOP™ LANS to replace significantly more expensive Remodulator Headends*
- Double conversion Heterodyne design using low noise, crystal referenced PLL local Oscillators - Crystal stability without spurious signals from crystal oscillators with multipliers
- SAW filtered IF for minimum group delay and stable adjacent channel operation
- Switch selectable Manual (adjustable fixed gain) or AGC operating modes (applicable to data transmission if a constant carrier is present)
- FCC Part 76.612 and 76.618 offsets standard for CATV models and available for LAN

LAN APPLICATIONS

- IEEE 802.7 Broadband Local Area Network Headends - Single and Dual Cable Systems
- IBM PC Network Headends
- MAP/TOP Broadband Headends to replace some Remodulators
- Security Systems
- Video Conferencing Systems
- Switched R.F. Broadband Communications Systems

*TOP is a trademark of the Boeing Company. *MAP is a trademark of General Motors

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

LAN TRANSLATOR

LAN TRANSLATOR	Model FT-6	Model FT-18
Channel Bandwidth	6 MHz	18 MHz
Maximum Gain	54 dB	54 dB
Maximum Output Level	60 dBmV	60 dBmV
Passband Width	5.2 MHz	16.4 MHz
Passband Flatness	±0.5 dB	±0.75 dB
Passband Format	Centered	Centered
Adjacent Passband Rejection	>50 dB	>45 dB
Spurious Outputs	-60 dBc	-60 dBc
Noise Figure	8 dB dB	8 dB dB
Input/Out Impedance	75 ohms	75 ohms
Return Loss	16 dB	16 dB
Test Point (Ref. to output)	-20 dB	-20 dB
Frequency Accuracy	±1 KHz	±1 KHz
Frequency Stability	±.5 KHz	±.5 KHz
Phase Noise	<65 dBc/Hz at 10 KHz	<65 dBc/Hz at 10 KHz
Output Attenuation	0-20 dB	0-20 dB

CATV CONVERTER

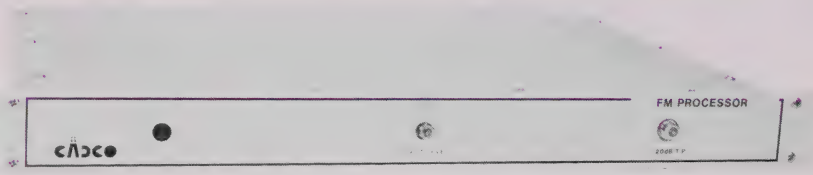
CATV CONVERTER	Model DT500	Model DT550
Channel Bandwidth	6 MHz	6 MHz
Maximum Gain	35 dB	50 dB
Maximum Output Level	45 dBmV	60 dBmV
Passband Width	5.2 MHz	5.2 MHz
Passband Flatness	±1.0 dB	±1.0 dB
Passband Format	NTSC Video	NTSC Video
Adjacent Carrier Rejection	>60 dB	>60 dB
Spurious Outputs	-60 dBc	-60 dBc
Min. Input for AGC Mode	10 dBmV	10 dBmV
Noise Figure	8 dB	8 dB
Input/Out Impedance	75 ohms	75 ohms
Return Loss	14 dB	14 dB
Test Point (Ref. to output)	-20	-20
IF Loop Level	+33 dBmV	+33 dBmV
Frequency Accuracy (FCC offsets)	±3 KHz	±3 KHz
Frequency Stability	±1 KHz	±1 KHz
Output Attenuation	0-20 dB	0-20 dB

MECHANICAL AND POWER

Dimensions	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 14" (35.56 cm) Deep
Weight	8 pounds (3.6 kg)
Power	115 VAC ±10 VAC at 30 Watts
Operating Temperature	40° F to 110° F (4.4° C to 43.3° C)

We recommend 1.75" (4.44 cm) Spacing between Rack Mounted Equipment

BROADBAND FM PROCESSOR FMP



FEATURES

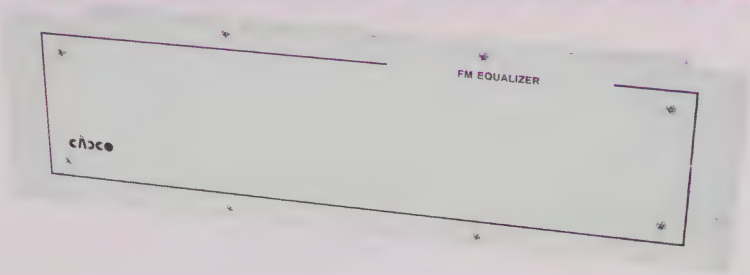
- High Gain 35 dB
- High Rejection of Channel 6
- Full Bandpass Filtering
- Hybrid Amplifier
- Up to +45 dBmV Output With Cross Modulation Better Than -60 dBmV

The CADCO Processor, Model FMP is an economical means of carrying FM stations. Input, Output and interstage bandpass filtering plus three traps insure that channel 6 will not produce multipath ghosting on channel 6. The input can be from an omni directional FM antenna or, if most signals are in one general direction, you can use the high gain CADCO FM Log Model FM-SSL-75 (FM). To achieve an approximate balance between all stations and attenuate any overriding local FM station, the CADCO FM Equalizer, Model FME, should be employed before the processor. If necessary, FM preamps are available from CADCO. Generally the FM amplitudes will be set at or below channel 6 audio levels.

SPECIFICATIONS

Frequency Range	92-108 MHz
Channel 6 Rejection	40 dB typical
Gain	+35 dBmV
Output	+45 dBmV
Input/Output	75 OHM "F" Connector Port
Size	Standard 19" (48.26 cm) Rack Mount, 1.75" (4.44 cm) High & 13" (33.02 cm) Deep
Weight	3 pounds (1.35 kg)
Power	115 VAC ±10 VAC at 10 Watts
Operating temperature	40° F to 110° F (4.4° C to 43.3° C)

BROADBAND FM EQUALIZER FME



FEATURES

- Twelve 10-dB Tunable Traps
- Tunes 80-110 MHz
- Balances Signal Levels
- Attenuates Out-of-Band Signals
- Stagger and Multiple Notch Tuning

The CADCO model FME is an FM broadcast equalizer. Installed at the input of an FM amplifier such as the CADCO FMP, the FME provides two functions (1) balances distant and local FM broadcast station signal levels and (2) attenuates out-of-band signals that cross-modulate with FM broadcast signals.

The FME features twelve 10-dB tunable traps, each providing signal rejection at the resonant frequency. Non-trapped signals are passed with minimal loss.

Tuning ranges overlap for stagger tuning, placing multiple notches on a single signal for increased attenuation.

SPECIFICATIONS

Tuning Range *Note: Traps are optimized for the tuning ranges given. Traps may be tuned to a lower frequency with minimal degradation.*	Trap 1 (A and B) 80-90 MHz. Trap 2 (A and B) 80-90 MHz. Trap 3 (A and B) 88-98 MHz. Trap 4 (A and B) 92-102 MHz. Trap 5 (A and B) 96-106 MHz Trap 6 (A and B) 100-110 MHz.
Frequency Range	80-110 MHz
Insertion Loss	1 dB
Adjacent Frequency Loss	
±200 KHz Notch	6 dB maximum
±400 KHz Notch	3 dB maximum
Impedance	75 ohms unbalanced
Return Loss	15 dB maximum 110 MHz
Connections	Female "F" Connector Ports
Size	Standard 19" (48.26 cm) Rack Mount, 5.25" (13.97 cm) High & 3.5" (8.89 cm) Deep

PREAMPLIFIERS VHF, UHF AND FM

FEATURES

- Low Noise
- High Gain
- All Solid State
- High Q Single-channel Selectivity
- Matched Input and Output
- Remote Power Supply Furnished
- All Hardware Furnished
- Two Case Models Available for VHF Preamplifiers*

All CADCO preamplifiers feature a selective front-end filter to protect against adjacent channel interference, noise figure as low as 2 dB and up to 30 dB gain. Operating voltage is supplied to the preamplifier through the antenna lead from the factory supplied power supply.

Models LB-BB and HB-BB feature high selectivity input and output bandpass filtering for excellent out-of-band signal, cross and intermod rejection. LB-BB covers channels 2 through 6, HB-BB covers channels 7 through 13. Excellent for overcoming splitter loss when feeding multiple signal processors from a single antenna.

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

PREAMPLIFIERS VHF, UHF AND FM

MODEL	CHANNELS	NOISE FIGURE	GAIN	BANDWIDTH	INPUT LEVEL/ TASO GRADE 1
LB-BB	2-6	5.5 dB	12 dB	Broadband	- 17 dBmV
SC-25	any single VHF Channel	2 dB	25 dB	4.5 MHz	-17 dBmV
LB-28	any single low-band	2 dB	28 dB	4.5 MHz	- 17 dBmV
FM-28/0	FM narrow banded	2 dB	28 dB	2.0 MHz	
FM-28BB	FM broad banded	2 dB	28 dB	Specify 92-108 or 88-108 MHz	
HB-BB	7-13	5.5 dB	12 dB	Broadband	-17 dBmV
HB-28	any single high-band	2 dB	28 dB	4.5 MHz	-17 dBmV
UHF-22LN	any single UHF	4 dB	20 dB	7.0 MHz	-15 dBmV
UHF-22LNP	any single UHF	4 dB	30 dB	7.0 MHz	-15 dBmV

Input/Output Impedance	75 ohms through "F" series female connector ports.
*Outdoor Housing	Models LB-28, HB-28, FM-28/0, FM-28/BB, UHF-22LN and UHF-22LNP are in a heavy duty gasket sealed cast aluminum case. Models SC-25, LB-BB and HB-BB are in a welded gasket sealed, sheet metal case.
Mounting	Tower leg or mast, up to 1.75" (4.44 cm) O.D. 1.75" (4.44 cm) Standard U-Bolts supplied.
Operating Temperature	-40° F to 140° F.
Power Supply	Remote separate from preamplifier, operating voltage diplexed through feedline, Zener regulated. Each preamplifier complete with power supply.
Ordering Information	Order by model number and specify channel of operation.

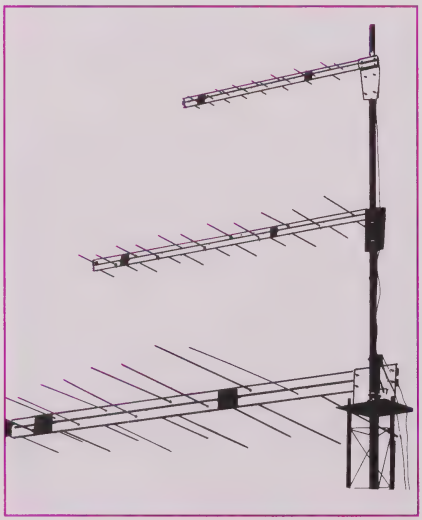
CATV ANTENNAS

FEATURES

- Log Periodic Designs
- Extra Rugged Heavy Duty Construction
- Superior Forward Gain
- Maximum Front-to-Back Rejection
- Excellent 75 ohm Match
- Solid Replaceable Aluminum Rod Elements
- Fast Assembly Time
- Minimum Shipping Cost
- Wind and Ice Resistant
- Mounting U-Bolts Furnished

Four-Bay Array of CADCO Model HB-SSL-75 Antennas

Customers report CADCO two-bay array gain equivalent to much publicized diamond quad arrays. Log periodic design assures lower side-lobe content and higher front-to-back ratio than Yagi designs, important for critical co-channel applications. CADCO logs are rugged, aluminum channel booms with solid replaceable aluminum rod elements. Low-band logs are single channel and center mount. High-band logs are end-mounted, covering channels 7 through 13 with constant gain. The CADCO Model LBB-SSL-75 is an end mounted, low band Log which covers channels 2 through 6. Similar high performance logs are available for FM, as are low-loss phasing harnesses for a multibay array. CADCO logs are furnished with mounting plates drilled to your specifications and steel hardware. CADCO's UHF Log covers channels 14 through 69. Designed for maximum performance, the UHF Log offers rugged construction, has solid aluminum replaceable rod elements and is rear mounted. Each UHF Log is shipped fully assembled with mounting hardware.



CADCO antennas *Top - UHF LOG*
Middle - HB-SSL-75
Bottom - LBB-SSL-75

SPECIFICATIONS

INTERNATIONAL MODELS AVAILABLE!

CATV ANTENNAS

MODEL/CHANNEL	GAIN*	ELE.	LENGTH	WIDTH	WEIGHT	F/B RATIO	SIDE LOBES
LBB-SSL-75 (2-6)	7 dB	10	120"	112"	18 lbs	-23 dB	min. -25 dB
LB-SSL-75 (2)	12 dB	9	225"	112"	45lbs	-30 dB	min. -30 dB
LB-SSL-75 (3)	12 dB	9	220"	98"	43 lbs	-30 dB	min. -30 dB
LB-SSL-75 (4)	12 dB	9	200"	90"	40 lbs	-30 dB	min. -30 dB
LB-SSL-75 (5/6)	12 dB	9	176"	80"	371 lbs	-30 dB	min. -30 dB
FM-SSL-75 (FM)	12 dB	9	146"	66"	331 lbs	-30 dB	min. -30 dB
HB-SSL-75 (7/13)	12 dB	11	93"	35"	121 lbs	-30 dB	min. -30 dB
UHF LOG (14/69)	12 dB	17	63"	13"	6l lbs	-30 dB	min. -30 dB

* CADCO antenna gain is measured over the reference dipole. For Isotropic gain add 2.14 dB.

MULTI-BAY ARRAYS

CADCO log periodic antennas may be vertically or horizontally stacked in pairs, quads, or larger configurations for improved forward gain and greater front-to-back or side lobe rejection. Two-Bay arrays increase forward gain 2.5 dB; four-bay arrays, 5 dB.

Stacking Dimensions when Co-Channel protection is NOT required.

(Dimensions are boom-to-boom distance in inches)

CHANNEL	2	3	4	5	6	FM	7	8	9	10	11	12	13
Horizontal	207	188	172	150	139	121	100	96	94	90	88	85	83
Vertical	207	188	172	150	139	121	100	96	94	90	88	85	83

Note Channels 2 through FM are calculated 1.0 wavelength
Channels 7 through 13 are calculated 1.5 wavelengths

One wavelength is determined by dividing 984 by center frequency of channel.

When stacking for Co-Channel protection, consult a CADCO antenna engineer.

ORDERING INFORMATION

CADCO supplies all antennas with U-Bolts and a mounting plate drilled to your specific tower leg or mast diameter. Specify outside diameter of tower leg or mast. All antennas are shipped assembled except for inserting and securing the elements. All hardware and replacement elements available separately. Antennas are shipped FOB Garland, Texas, by truck; specify your local truck service if possible. Model HB-SSL-75 and UHF Log are UPS shippable. Support arms or mounting frames not included.

SINGLE CHANNEL UHF DISH

Model SSD-8-75 UHF Dish

FEATURES

- 8-Foot (2.44 Meters) Diameter
- Superior Forward Gain
- Excellent 75 Ohm Match
- Horizontal Linear Polarization
- Minimum Wind Load
- Extra Rugged Heavy Duty Construction
- Tower Leg or Mast Mounting
- Mounting U-Bolts Furnished
- Screen Mesh Reflector

SPECIFICATIONS

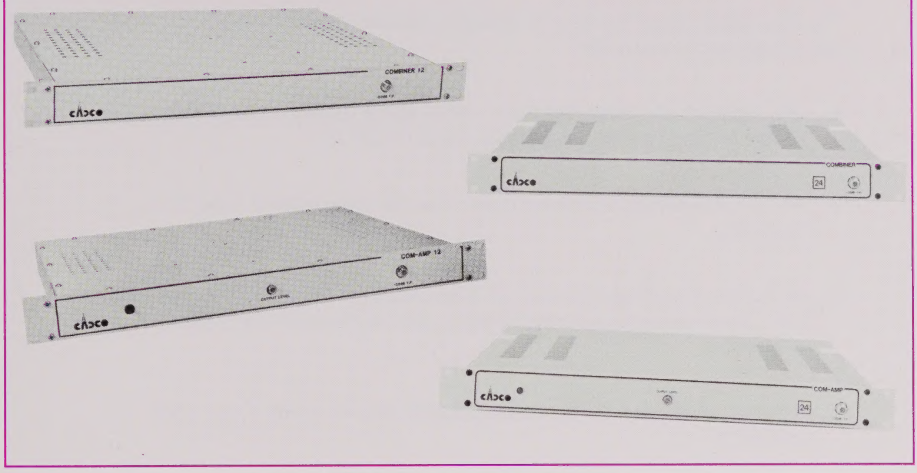
Frequency Range	Any Single Channel 14 through 69 or Dual Channel Feed up to 2 additional Single Channel Feed Assemblies may be mounted on a single Dish.
Gain	Channel 14: 17 dB over reference dipole; 19.14 dB isotropic Channel 50: 20 dB over reference dipole; 22.14 dB isotropic
Horizontal Beamwidth	Channel 14: 20 degrees Channel 50: 13 degrees
Impedance	75 ohms return loss better than 20 dB for low VSWR
Assembled Weight	50 pounds (22.5 kg)

ORDERING INFORMATION

The CADCO 8-foot UHF Dish is supplied with U-Bolts and a mounting plate drilled to your specific tower leg or mast diameter. Specify outside diameter of tower leg or mast. The CADCO 8-foot dish is shipped fully assembled except for attaching the feed assembly with four bolts. Antennas are shipped FOB Garland, Texas by truck; specify your local truck service if possible.

INTERNATIONAL MODELS AVAILABLE!

12 AND 24 CHANNEL COMBINERS COMBINER/AMPLIFIERS



FEATURES

The CADCO combiners provide a convenient low-cost, high isolation means of connecting all single-channel processing equipment into a distribution system or trunk line. Com/Amps provide amplification if +45dBmV output modulators and processors are used and high level output is needed.

SPECIFICATIONS

	Combiner 12	Combiner 24	Com/Amp 12	Com/Amp 24
Frequency Range	50-440 MHz			
Insertion Loss	15 dB max.	18 dB max.	—	—
Recommended Input Level	—	—	37 dBmV	37 dBmV
Gain	—	—	up to 17 dB	up to 14 dB
Input Ports	12	24	12	24
Output Ports	1	1	1	1
Isolation Port to Port	20 dB	20 dB	20 dB	20 dB
Output Level, Max	—	—	+54 dBmV	+51 dBmV
Powering	N/A	N/A	110 VAC	110 VAC
Test Point (ref. to output)	-20 dB	-20 dB	-20 dB	-20 dB
Impedance	75 Ohms	75 Ohms	75 Ohms	75 Ohms
Dimensions	1.75" (4.44 cm) high			
	13" (33.02 cm) deep			
	19" (48.26 cm) rack			

Suggestions For Headend Racking and Maintenance

For prolonged equipment life and operating stability, the following recommendations are made:

1. All headends should be installed in an environmentally controlled dust-free room having a nominal temperature of 80° F (26° C).

2. All components should be mounted in standard equipment racks or cabinets.

3. All equipments should be rack spaced one panel height, 1.75 inches (4.44 cm). There should be nothing between the components that prevents air circulation.

4. All equipment racks should be electrically bonded together and earth grounded.

5. All equipment interconnecting RF cables should be a minimum of double shielded and quad shield is highly recommended. Poorly shielded cable causes cross-modulation picture degradation between components.

6. Always use the coax connector intended for the coaxial cable used and install as recommended by the manufacturer. Connectors should be RFI shield type.

7. RF input and RF output cables should be on opposite sides of the equipment rack. NEVER bundle input and output RF cables together.

8. Operate each modulator and processor at the RF output level recommended. If necessary to reduce RF output level, always operate the equipment at the recommended output level and reduce the RF output level with the appropriate value "barrel-type" pad.

9. Equipment RF test points are only relative indicators of the actual RF output level. They may vary ±3 dB. RF operating level measurements should be made at the RF output of each equipment.

10. When the headend is initially placed in service, create a log record of all operating parameters for each channel's equipment. Referring to these records during routine maintenance allows recognition of any operating changes.

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